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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/964,426	09/28/2001	Akio Handa	0505-0869P	1515

2292 7590 11/19/2003

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EXAMINER

BOEHLER, ANNE MARIE M

ART UNIT	PAPER NUMBER
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3611

DATE MAILED: 11/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

SW

Office Action Summary

Application No.

09/964,426

Applicant(s)

HANDA ET AL.

Examiner

Anne Marie M. Boehler

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-18 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-15 of U.S. Patent No. 6,530,447. Although the conflicting claims are not identical, they are not patentably distinct from each other because although the claim language is not the same, all of the presently claimed features were recited in the earlier patent claims, except for the inclusion of nine engaging/disengaging members between the drive and driven shafts. By applicant's own admission it is conventional to use eight engagement members in the present environment. Absent criticality with respect to the number of members used, it would have been an obvious design choice to use nine rather than eight members, in order to provide more support around the circumference of the switching unit.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Itoh et al. in view of Gao

Itoh shows a switching device in a drive train of a four-wheel drive vehicle. The switching device includes a drive shaft 4 with inner ring cam 7, a driven shaft with outer ring 2 and engaging/disengaging members between the inner and outer rings. An elastic member (c-shaped spring in Figure 3) is connected between the inner ring 4, 7,

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and a retainer 8 for the members biases the members into direction to connect the shafts. When the vehicle is set in a two-wheel drive mode the members are moved to disconnect the shafts. Itoh also includes an electromagnetic clutch for setting the vehicle in a two or four-wheel drive mode.

Itah shows eight engaging/disengaging members, rather than nine.

Gao shows an odd number (seven) of engaging/disengaging members between driving and driven shafts in a motor vehicle.

It would have been obvious to use seven rather than eight members, as taught by Gao, in order to provide an efficient clutch unit. It would also have been obvious to provide nine rather than eight members in order to provide more support and load transferring capacity within the clutch.

4. Applicant's arguments with respect to claims 1-18 have been considered but are moot in view of the new ground(s) of rejection.

Applicant has presented arguments and a declaration pointing out why it is critical to provide an odd number of engagement/disengagement members in the clutch. Gao has now been added to the rejection to show that providing an odd number of engagement/disengagement members in clutch is not novel or unobvious. Applicant's arguments did not separately point out why the use of nine members is critical and, therefore, the examiner maintains that it would have been obvious to provide nine members, in order to increase the load transfer capacity.

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Kilwin teaches using nine clutch ball members, rather than seven or five, to safely provide greater load capacity.

Giometti shows an electromagnetic clutch with three roller members.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anne Marie M Boehler whose telephone number is 703-308-0422. The examiner can normally be reached on 7:30-5:00, Monday-Thursday, and alternate Fridays,.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lesley Morris can be reached on 703-308-0629. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9325 for regular communications and 703-872-09327 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

amb 11/14/03

Anne Marie M Boehler
Primary Examiner
Art Unit 3611

amb
November 14, 2003